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AUTHOR Ostergren, Bertil
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ABSTRACT

The management of change, defined as organizational measures for promoting change and, therefore, close to management for change, is discussed. It is recognized that change does not necessarily represent improvement: evaluation of innovations constitutes one of the most important tasks of management. In this report the first chapter outlines the Swedish system of higher education. After examining various types of change, two are selected for discussion: national reforms, oriented toward organizational, administrative, and legal structures; and educational innovations, dealing with content, methods, and structures of learning. Chapter Two treats two fundamental problems of change management: at what point innovation should be placed within or outside the control of management; and how administrative structures may serve as obstacles to innovation. Subsequent chapters address issues of reform in education in general, and higher education in particular. The final chapter draws several conclusions, based on the Swedish reform experience, about where and under what conditions educational change can be managed, and how organizations should be conceived in order to be innovative. It is concluded that although the Swedish experience differs from other nations' in important ways, much of what has been learned is transferable. (MSE)

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Division of Educational Policy and Planning

HE 011 979

Unesco, Paris

THE MANAGEMENT OF CHANGE IN SWEDISH HIGHER EDUCATION

by

Bertil Östergren

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FOREWORD

Unesco's General Conference at its 19th session (Nairobi, Kenya, 1976) resolved that the Secretariat give particular attention to "gathering and disseminating information about new educational policies for the renewal of educational systems, adapted to specific needs on the basis of particular social, economic and cultural situations and aimed at promoting democratization of the systems within the framework of life-long education" (Programme Resolution 1.111).

In line with this mandate the Division of Educational Policy and Planning began in 1977 reproducing selected technical papers and distributing them as a series under the general title: "Reports, Studies ...". The aim of this series is to stimulate reflection and discussion on current issues confronting educational policy-makers, planners, administrators and school architects. Distribution is limited to Unesco officials at Headquarters and in the field, as well as interested technical personnel in governmental and private institutions. It is hoped that this series will promote and serve as a vehicle for increasing communication between individuals and institutions concerned with policy and planning aspects of education.

The "Reports, Studies ..." series consists of two sub-series : (i) papers with a subject orientation (numbered S.1, S.2, etc.) and (ii) papers focusing on a given country (numbered C.1, C.2, etc.). Subject papers deal with such topics as educational policies and legislation, planning and management techniques, planning and design of educational space and facilities, the relationship of education to productive work and employment, inter-country cooperation, the role of education in respect of the New International Economic Order, etc. Country papers are either brief profiles of the educational system of a particular country (mainly the LDCs) or treat a specific reform or aspect of the country's educational system.

Some of the papers reproduced in the series are "desk studies" based on information available within Unesco, others were originally prepared as background or discussion papers for a meeting or seminar, while still others are personal position papers representing part of a continuous dialogue within the Unesco Secretariat.

Papers are selected for the series on the basis of their topical interest. Readers should bear in mind that many, if not most, of the papers are working documents, unedited and not intended for public distribution. Some of the authors have written in a language other than their mother tongue, which explains certain linguistic deficiencies. It must also be stressed that the papers present the ideas of their respective author and do not necessarily reflect the policies of Unesco.

The Division of Educational Policy and Planning welcomes comments and suggestions concerning the series and invites readers to make known their reactions to particular ideas presented or to entire papers. In certain cases it may be possible to reproduce such comments and reactions in a subsequent issue of the series. For the convenience of readers who may wish to contact the author of a paper, the current contact address is given whenever possible.

AVANT PROPOS

La Conférence Générale de l'Unesco, lors de sa 19e session (Nairobi, Kenya, 1976) a décidé que "la collecte et la dissémination de l'information sur les nouvelles politiques d'éducation pour le renouvellement et la réforme des systèmes d'éducation adaptés aux besoins spécifiques basés sur des situations sociales, économiques et culturelles particulières et qui ont comme objectif la démocratisation des systèmes dans le cadre de l'éducation permanente" (Résolution 1.111 du programme) se situent parmi les objectifs prioritaires de l'Organisation.

Conformément à ce mandat, la Division des politiques et de la planification de l'éducation a entrepris en 1977 la reproduction et la distribution de certains documents techniques, sous le titre général de "Rapports et Etudes ...". Cette série a pour objet de stimuler la réflexion et les discussions portant sur les problèmes courants auxquels doivent faire face les décideurs, les planificateurs et les administrateurs de l'éducation ainsi que les architectes scolaires. La distribution se limite aux professionnels du Siège et hors-Siège, ainsi qu'aux personnels d'institutions gouvernementales ou privées susceptibles de les trouver utiles pour leur travail. Nous espérons que cette série constituera un moyen pour promouvoir et augmenter la communication entre les individus et les institutions concernés par les différents aspects des politiques et de la planification de l'éducation.

Ces "Rapports et Etudes ..." se divisent en deux catégories: (i) les documents qui traitent d'un sujet (numérotés S.1, S.2, etc.) et (ii) les documents qui traitent d'un pays (numérotés C.1, C.2, etc. Les premiers portent sur des sujets tels que les politiques et la législation de l'éducation, les techniques de gestion et de planification, la planification et l'étude des espaces, constructions et équipements éducatifs, la relation entre éducation/travail/emploi, la coopération entre les pays, le rôle de l'éducation par rapport au Nouvel ordre économique international, etc. Les seconds présentent des profils du système éducatif d'un pays donné (principalement les pays les moins développés), ou traitent d'une réforme ou d'un aspect spécifique du système éducatif du pays concerné.

Certains des documents reproduits dans cette série sont des "desk studies" basées sur des informations déjà existantes à l'Unesco, d'autres ont été préparés à l'origine pour servir de documents de base ou de discussion à des réunions ou séminaires, alors que d'autres encore, exprimant les positions personnelles des auteurs, se situent dans le cadre d'un dialogue permanent au sein du Secrétariat de l'Unesco.

Les documents sont choisis pour cette série en fonction de l'actualité du sujet traité. Les lecteurs doivent tenir compte du fait que beaucoup, sinon la plupart, des documents sont des documents de travail inédits et ne sont pas destinés au public. Certains auteurs ont rédigé ces documents dans une langue qui n'est pas la leur, ce qui explique certaines faiblesses linguistiques. Nous voudrions également souligner que les documents expriment les idées de leurs auteurs respectifs et ne reflètent pas nécessairement la politique de l'Unesco.

La Division des politiques et de la planification de l'éducation souhaite recevoir des commentaires ou suggestions au sujet de la série, et demande aux lecteurs de bien vouloir faire part de leurs réactions à certaines idées exprimées ou à des documents dans leur ensemble. Dans certains cas, il sera peut-être possible de reproduire ces commentaires et réactions lors d'une prochaine parution de la série. Les adresses des auteurs des documents sont indiquées afin de donner aux lecteurs qui le désirent la possibilité d'entrer en contact avec eux.

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RESUME

L'auteur définit la gestion du changement comme l'expression de mesures d'organisation visant à promouvoir le changement. Ainsi comprise, la gestion du changement est très proche de la gestion pour le changement. L'auteur met en garde, toutefois, contre l'interprétation qui laisserait supposer que toute réforme ou toute innovation est facteur d'amélioration ; l'évaluation des innovations constitue en fait une des tâches importantes de la gestion.

Le premier chapitre trace les grandes lignes du système de l'enseignement supérieur suédois de façon à permettre au lecteur de comprendre le contexte de cas qui seront présentés ultérieurement. Après avoir examiné différents types de changement, l'étude est consacrée à deux d'entre eux : les réformes nationales (orientées sur les structures d'organisation, administratives et juridiques) et les innovations éducatives (orientées vers les contenus, méthodes et structures de l'apprentissage). Le chapitre 2 traite de deux problèmes fondamentaux dans la gestion du changement : l'un pose la question de savoir jusqu'à quel point l'innovation est placée sous le contrôle ou en dehors du contrôle de la gestion; l'autre traite de comment les structures administratives constituent un obstacle à l'innovation et de la façon de les changer pour leur permettre de promouvoir cette innovation. Le chapitre 3 contient une description de l'appareil politique et administratif destiné à concevoir, décider et mettre en oeuvre les réformes de l'éducation. Ce même chapitre décrit également les structures spéciales d'organisation destinées à promouvoir la recherche, le développement et l'innovation dans le domaine de l'éducation. Dans les chapitres 4 et 5 qui constituent les parties centrales empiriques de l'étude, sont résumés et analysés des cas de réformes et d'innovations dans l'enseignement supérieur.

Dans le dernier chapitre, l'auteur tire quelques conclusions basées sur l'expérience suédoise cherchant à savoir jusqu'où et dans quelles conditions le changement de l'éducation peut être géré et examine enfin la façon dont les organisations devraient être conçues afin d'être innovatives. Il conclut cette étude par quelques remarques sur "l'applicabilité" de l'expérience suédoise aux systèmes de l'enseignement supérieur d'autres pays.

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1. INTRODUCTION

1.1 The purpose of the paper

Problems of change have attracted more and more attention during the last few decades. Particularly since the 1960's the number of books and papers within this area has grown. Within innovation research, more was published during the 1960's than during the three preceding decades.[1)]

This literature deals with different aspects of various types of change within many areas. One of these areas is education; much has been published about educational innovations.[2)]

This paper deals with change within higher education, more specifically the management of change. What does the expression "the management of change" mean?

The expression "management of change" has been frequently used, as can be seen from the bibliography of this paper, and in varying, and sometimes vague ways. I use the expression with reference to organizational measures to promote change. These organizational or managerial measures are of two types. One is aimed at realizing a specific change in a specific situation. The other type deals with arranging the conditions within the institution so that they become more favorable to innovation.

The concept management of change, as used in this paper, comes close to management for change. But from that it does not follow, that this paper is based on the assumption that all reforms and innovations are for the better. On the contrary, it must be a task for management to value and evaluate innovations. What reforms and innovations are deemed to be good or bad is a question of values and interests and it is not the purpose of this paper to give criteria for what is good and

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1) Rogers-Shoemaker, p. xvii.

2) See the bibliographies in, for instance, Collier, or Havelock 1970, or House, or Huberman, or Miles, or Morrish, or Stenhouse.

what is bad in educational change.

Management of change is a management for change in the sense that the organization must be capable of promoting and implementing a particular change but also that it must have a high general potential for self-renewal and adaptability to changes in its environment. Even if innovations also have to be rejected, it does not seem to be a major problem to improve organizational capacity in this respect. Educational institutions are usually better in resisting than in fostering change.

The task assigned to me is to discuss the management of change on a specific empirical basis, namely reform and innovation processes in higher education in Sweden. To what extent conclusions can be drawn to education in general and to what extent the experiences may be transferable to other countries are problems which will be discussed in chapter 6.

This paper is composed in the following way. In this introductory chapter 1 I will describe the main outlines of the Swedish system of higher education so that the reader will be able to understand the context of the cases later presented. After that different types of change are discussed; the paper will concentrate on two types of change: national reforms (focusing on organizational, administrative and legal structures) and educational innovations (focusing upon the contents, methods and structures of learning). Chapter 2 defines what is supposed to be two basic problems in the management of change. One concerns how far management can manage; to what extent do innovations lie inside or outside the direct control of management. The other problem deals with in what ways administrative structures impede innovation and how they can be changed to promote innovation. Chapter 3 contains a description of the political and administrative apparatus for designing, deciding and implementing reforms of education. It also describes the special organizational structures intended to promote research, development and innovation in education. Chapters 4 and 5 are

the central empirical parts of the paper. They summarize and analyze cases of reforms and innovations in higher education. In chapter 6, the conclusions are drawn. These are of two types. One refers to change strategies, in particular related to the problems outlined in chapter 2. The other type deals with the general applicability of the conclusions.[1)]

1.2 The Swedish system of higher education

A major reform of Swedish higher education took place in 1977.[2)] It meant, among many other changes, a widening of the system of higher education from traditional universities and professional schools to other types of post-secondary institutions. Before 1977 the system included six universities and some separate professional schools (for medicine, engineering, social work etc.). The system now includes other state institutions mainly based on former university branches and teacher training colleges but also municipal institutions such as nursing schools.

As our cases must refer to things that have already happened, it is the pre-1977 system that is the relevant setting. But in chapter 4 examples are chosen from the 1977 reform itself. The following description of the organizational structure of the Swedish system of higher education covers the pre- as well as the post-reform system. (It does not, however, identify all changes that have taken place within the organizational structure, nor does it discuss other aspects of the reform.)

Swedish higher education has by tradition been part of a centralized national administration. Such features of the Swedish society as its small population, its religious and ethnic homogenity and the strength of central government have contributed to give higher education its traits of centralism and uniformity. But in spite of this, academic freedom in teaching and

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1) Parts of this paper are based on research undertaken by the author together with some colleagues. I am indepted to Barbro Berg, Torsten Kälvemark and Rune Premfors, who contributed to different parts of this research.

2) Descriptions of the reform can be found in Dahllöf and in Östergren 1975 b.

research has been strictly upheld during the 20th century.

The professoriate and the national government (mostly represented by the Ministry of Education) previously shared the power. During the 1950's and the 1960's power was successively distributed more evenly among all levels and all categories of interest groups.

Parliament makes decisions on the funding of higher education and research. It is also the decision-making body in matters which are considered to be particularly important, e.g. the nature of institutions and the number and character of professorships.

The Ministry of Education (or, formally, the government), among other things sets rules for use of the funds, appoints full professors, appoints national committees for investigations on problems of higher education and research, and decides on complaints about decisions of subordinate bodies (e.g. concerning appointments and admittance). As the 1977 reform means that the institutions have more freedom in how to use their allocations, the regulations of the Government are not as detailed and binding as prior to the reform.

Before 1977, the Office of the Chancellor of the Swedish Universities was the national authority for higher education and research. (In other countries this office, or most of it, would usually have been part of the Ministry of Education). Among the duties of the Office can be mentioned to make budgetary requests to Government on the basis of proposals from the universities, to appoint certain types of university teachers, to handle admissions to the extent that they are centralized, to establish guidelines for educational programs and courses and to take initiatives to further higher education and research.

As part of the reform, the Office was reorganized to the National Board of Universities and Colleges. It has bureaus for education and research (three bureaus serving five planning boards for the various sectors of higher education and research), budget and common resources, research and development, central admissions, and administration. One of the aims of the 1977 reform was to decentralize decision-making; thus an intended role change for the central authority was that it shall be less regulating and more stimulating.

Since 1977, there are six regional boards. They have small offices of a few persons and their main task is to plan the distribution of facilities of higher education within the region; part of the funding passes through these regional boards.

The "institutions" were, before 1977, universities with several faculties[1] or professional schools with one or two faculties or a number of sections. Medical and technical education and research may thus either be organized as a faculty within a university or form a separate professional school. From 1977, various types of colleges are also parts of the system of higher education.

An institution is headed by a rector. The Rector's Office makes decisions regarding day to day concerns. The highest decision-making body of an institution is its board. Before 1977, it consisted of the rector (as chairman), the deputy rector, the administrative director, deans, and the representatives for teachers, students and non-teaching staff. In 1977 the composition of the boards was changed, and representatives of the society at large have been included.

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1) The term "faculty" is used in the European sense of the word, i.e. corresponding to the school or college in an American university.

Most institutions were, before 1977, divided into faculties; in some cases a faculty was divided in sections . A faculty consists of a group of departments within related disciplines. A dean is chairman of a faculty or section. Questions concerning educational matters were settled through educational program committees consisting of representatives for teachers, students and non-teaching staff. Many educational program committees had a director of education as executive officer.

After the 1977 reform, the faculties are responsible only for research and graduate education. Undergraduate education is organized in professional sectors. Within such a sector, one or more educational program committees are responsible for undergraduate education. The committees now have more economic power, and representatives of the labour market have been included in their membership. There are five professional sectors: technical professions; administrative, economic and social professions; medical and nursing professions; teaching professions; cultural and information professions.

The basic unit of a university or professional school is generally the department, which conducts its activities within the framework of a discipline. Colleges are usually not organized in departments. In certain cases, there are also interdisciplinary centers within an institution.

The department is headed by a department board, where teachers, non-teaching staff and students are represented. The executive leader is the department chairman. He is often aided by one or more directors of studies, i.e. teachers with responsibility for planning and administration of undergraduate education. Certain teacher categories are mainly involved with research and graduate education, namely professors, associate professors, assistant professors and research assistants. Another group devotes itself mainly to undergraduate education, namely lecturers and assistant lecturers. In addition, there are various types of assistants, often graduate students.

Most departments conduct research, graduate education and undergraduate education. Undergraduate education is organized in courses, which make up an educational program leading to a degree. Courses may also be taken independently.

The above description is only intended to give general outlines of the system. Special features of the organization related to initiating and implementing change are accounted for in chapter 3.

1.3 Types of change

Even if much research has been done on problems of educational innovation, it is unusual to find efforts which systematically classify various types of change. A classification in broad categories is this one:[1)]

"1) National reforms
2) Innovations
   a) system-consistent innovations
   b) system-deviating innovations
3) Physical change

The concept "national reforms" has reference to broader and more farreaching changes, decided by parliament or, in some cases, by the Cabinet or the National Board of Universities and Colleges. Decisions about changes made by central governmental authorities are referred to this category only if they have this character of national reforms. Other types of change according to a center-periphery model can be classified as "innovations" or "physical change".

Physical change refers to changes in the physical environment of education, research and administration processes. As examples can be mentioned new buildings of a kind that does not change the character of the processes, a new parking area etc.

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1) From Premfors-Östergren, part III, chapter 2.1.

Innovation means the introduction of something new into the processes of education, research or administration (with the exception of national reforms). An innovation is system-consistent if the renewal follows a conventional or generally accepted pattern. Examples are the introduction of a new text-book of a character that does not change the deeper structure of the curriculum, or the continuous renewal of the curriculum content in accordance with existing paradigms. A system-deviating innovation is inconsistent with traditional patterns; it implies a deviation from the interests of the majority of the members of the system which is affected, or from its ideology, or from its technology, or from its organizational structure, or from the type of its environmental relations.

The system-deviating innovations are, by definition, conceived of as a threat in some respect to the system where the innovation takes place, or to subsystems within it. The threat may, of course, be felt as more or less dangerous. In the literature other terms can be found as a means of distinguishing between two broad categories of educational innovations: paradigmatic and extra paradigmatic, continuous and discontinuous, affecting superficial or deeper structures. The various terms seem to represent approximately the same type of distinction between two categories."

The discussion in this paper will focus on national reforms and system-deviating innovations, because these are best suited to illustrate problems concerning management of change. Problems relating to system-consistent innovations will be briefly touched upon, while physical changes will not be discussed at all.

2. PROBLEMS FOR THE MANAGEMENT OF CHANGE

The problems concerning the management of change are many and multiplex. If, in a short paper, you had the ambition to cover almost all of them, the presentation would be more fragmented and diffuse than could be defended from a pedagogical point of view. Therefore, this paper will emphasize two basic problems of the management of change, even if broader contexts also are touched upon.

One problem can be formulated as follows: How far can management manage? Political and administrative authorities tend to overestimate their potential to force institutions of higher education to undertake certain changes. Putting words on a piece of paper does not always change realities, not even if the words form laws and regulations.

The other basic problem concerns the effect of organizational structures on the capability to change, on the innovativeness of the organization. Can certain administrative structures and managerial measures indirectly promote change by making it easy for change processes to start and develop and for innovations to be institutionalized?

To get a perspective on these two basic questions, let us first consider some common types of ideas and strategies concerning educational change.

Havelock has described three change models that are often referred to: The research and development model, the social interaction model and the problem solving model.[1] According to the R&D model, a manifest educational problem is attacked by research, and, hopefully, solved in principle. The solution is tested and developed in practice. And then the results are disseminated and accepted within the organization. The R&D model offers the theoretical background for the establishment

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1) Havelock 1971.

of R&D organizations within educational systems.

The social interaction model implies that the innovation is disseminated between persons or organizations. "Widely used in medicine and agriculture, it stresses the importance of inter-personal networks of information, of opinion leadership, personal contact and social integration." [1)]

The problem-solving model means that the user of the innovation has a need which he expresses by trying to diagnose the problem. He then searches for solutions, defines goals and priorities, chooses a solution, plans its implementation and implements, evaluates and revises the innovation. Then a dissemination possibly takes place.

Even if these models differ considerably from each other, e.g. with reference to the divergent roles played by the users of the innovation, they have important traits in common. They are rationalistic models and they are diffusion models. They build on the assumption that innovations are developing on rational grounds, and that they are disseminated and are adopted by a decision based on intellectual deliberations. But are institutions of higher education "rational" organizations? And is dissemination always an effective way to bring about change?

In my opinion, it is extremely profitable to look upon educational institutions as social systems and to analyze their problems on the basis of a systems approach. What characterizes universities and colleges as social systems? Five characteristics are suitable for the description of a particular system: its membership, its ideology, its technology, its organizational structure and its relations to the environment.[2)]
Let us take a look at institutions of higher education from this point of view.

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1) Huberman, p. 62.

2) This model has been developed in Berg-Östergren.

The most powerful membership group is the professors and the other teachers and researchers. In the traditional universities they are usually organized in subsystems according to disciplines (departments); in other institutions their orientation is more to professions and to the labor market. In the traditional institutions the disciplines determine competence, professional identity and much of the contacts outside the departments. Other member groups are students and administrators, and among them there are also various types of subsystems.

The ideology of an organization is built up of needs, interests, values and goals. In higher education the ideology is to a large extent determined by the disciplines. Three broad goals determine the activities: graduate education, research, undergraduate education. Within these fields the objectives are complex and frequently contradictory. It is also difficult to measure the achievement of goals. Consequently, it may be almost impossible to determine whether or not a change is desirable from the standpoint of goal achievement.

Characteristic for the technology of higher education is that the activities are generally conducted with high personnel intensity and low capital. The aim is not to produce goods but knowledge. These circumstances make innovations in higher education highly sensitive to personal behavior and social interaction. Human attitudes and relations are often particularly affected by innovations.

The discipline orientation is reflected in the organizational structure, which in traditional universities is based on disciplines (departments) or groups of disciplines (faculties).

In their relations with the environment, universities and colleges in Sweden have a common denominator: they are not exposed to economic competition and not under pressure from the market to innovate in order to survive. In other respects there are great differences between various parts of the system concerning the intensity and character of environmental

relations. The interest groups in the environment are many and have different demands on higher education.

If systemic conditions such as those mentioned above, together with individual reactions, determine the fate of reforms and innovations, it follows that purely rational models are not applicable. For what is rational or good to one subsystem (e.g. a discipline or group of teachers, students, administrators or politicians) is irrational and bad to another subsystem. They have different interests (needs, values, goals). And what is desirable with respect to one objective may be undesirable if looked upon from another perspective. Often it is difficult or impossible to predict the effects of a certain change with respect to a particular set of goals. Also, subsystems and individuals have private and hidden goals, which may govern their behavior contrary to the official goals of the institution.

It must be observed, that this implies a critique of the models not only because they have a rationalistic bias, but also because they are diffusion models. The rationality and the diffusion approach are linked to each other: an individual or a subsystem is supposed to change things on the basis of information because they are "rational" in the way that they act in accordance with the goals of the institution.

There are other reasons for critique of the rationalistic diffusion models. They are built on assumptions of educational technology that detailed objectives can be deducted from superior goals and more or less automatically translated into means. However, our insight that things are more complicated than that has steadily been growing.

Another limitation to the diffusion approaches in innovation research is their individualistic bias. They concentrate on technical products which are used by individuals; much research deals with new products used by farmers and physicians. But educational change is often organizational change, and it is consequently determined by systemic factors.

The rationalistic diffusion models are, however, not totally unrealistic. They are partly useful for some types of innovations but of little use for others. They do not offer a sufficient basis for the management of innovation, particularly not educational innovation.

Chin and Benne present another type of change strategy than Havelock's: the three general models for social change.[1] One of them is the empirical-rational strategy, which resembles the R&D strategy. The normative-reeducative strategy aims at changing attitudes and values according to two major purposes: to increase the ability to solve problems and to develop self-knowledge and willingness to development. Education may be directed not only toward individuals but also toward systems. The normative-reeducative strategy has similarities to Havelock's problem-solving model and is allied with the so called human relations school. The power-coercive strategy means that power-based sanctions may be used in order to implement change; this strategy is typical for national reforms.

Even if the strategies described by Chin and Benne represent broad categories which contain various specialized strategies and even if they describe change strategies that are used in practice, they do not seem to offer a sufficient basis for the management of educational change. They are to a considerable degree based on rationalistic, individualistic diffusion research. They are at the same time too broad and too specific. They are too broad in the sense that they do not allow for combinations and adaptations dependent on the type of change, the type of systems involved and the specific circumstances in a case. And they are too specific because they ara based on too limited assumptions about how change takes place.

Sound practical advice concerning management of change should be based on relevant change strategies and they, in turn, should be founded on coherent innovation theories. But the present situation in innovation research is confusing and un-

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1) Bennis-Benne-Chin, pp. 32-59.

clear.[1] What is needed is a firmer combination of empirical studies and theory building.

Let us now get back to the two basic problems mentioned in the beginning of this chapter.

How far can management manage? The American sociologist Martin Trow has coined the expression "public and private lives of higher education."[2] Can it be so that the private lives of universities are more or less resistant to managerial actions from above? The Polish professor Jan Szepanski has said that there are three different university worlds: the world of the ideal models; the world of formal organization and formal rules; the monday morning reality world.[3] National government and administration live perhaps too much in the first two worlds and too far from the third of the university worlds, and so they may misjudge not only how far management can manage but also what effects managerial measures have?

Our second basic question was: How can organizational and administrative structures promote innovativeness? A classical approach in this field is that of Burns and Stalker in "The Management of Innovation" (1961). On the basis of empirical studies of British industries they described two types of organization: mechanistic and organic. The first one, which is suited for stable conditions, is hierarchical and characterized by functional specialization. The organic type has a knowledge-related and holistic division of labor and is characterized by multidimensional interaction; it is suitable for change. But educational institutions are different from industries and they cannot simply imitate models developed for other organizations, even if some knowledge may be applicable for systems of education.

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1) See the discussion in Berg-Östergren, pp. 111-115.

2) Trow 1975.

3) Oral information.

The brief discussion in this chapter indicates that I sympathize with approaches to the management of change which emphasize: 1) the organizational factors affecting reforms and innovations, 2) the specific circumstances with respect to type of change, type of organization, actual situation etc. This view represents, in other words, a combination of a system's approach and a contingency approach.

3. ORGANIZATION FOR CHANGE

It is possible to distinguish between four types of organizational mechanisms to facilitate reforms and innovations in Swedish higher education. One is the national political and administrative apparatus for the planning and the implementation of reforms. Another is the administrative structure within universities and colleges. A third one is the special R&D organization for higher education. The fourth one is the system of in-service training for university teachers ("faculty development", to use the American expression).

3.1 The national political and administrative apparatus

The organization for analysis of the needs for national reforms, for designing them and for implementing them, has the appearence of straightforwardness and rationality. There is a direct "line of command": the Parliament (which has a standing committee for education) - the Cabinet with the Ministry of Education - the National Board of Universities and Colleges (formerly the Office of the Chancellor of the Swedish Universities) - the institutions. At the level of the Ministry of Education, ad hoc committees are appointed to look into reform needs and to develop patterns and proposals for change. They are usually well staffed and are composed of persons representing expertise as well as different interest groups and/or political parties (even if a specific task is sometimes assigned to a single expert). The task of a committee may cover a wide area or be very limited.

Within higher education, committees with comprehensive terms of reference have in post-war years almost had a cyclical character. They have worked for several years and each has produced several reports. The years for the appointment of such committees have been 1945, 1955, 1963 and 1968. The later one, known under the name U 68, had an unusual composition:

its four members were the Under-Secretary of the Ministry of Education, and the heads of the Office of the Chancellor, the National Board of Education, and the National Labor Market Board. But the commission had three reference groups, representing the political parties, the educational interest groups and the labor market organizations respectively. Apart from the members of the commission and the reference group, a great number of secretaries and experts were involved in the U 68 work from 1968 to 1974. The work of U 68 was one of the foundations for the 1977 reform of higher education, which will be taken up as one case (or rather a complex set of cases) in the next chapter.

Planning committees can also be appointed at the level of the National Board of Universities and Colleges.

After a committee has delivered a report, it is sent out for comment to concerned bodies of various types, i.e. governmental authorities, universities and colleges, and private organizations. This is the so called "remittance procedure" (remiss). On the basis of the committee reports and the comments upon it, a decision is prepared. For committees at the Ministry level the decisions are prepared in the Ministry of Education and are presented as a proposal to Parliament. For committees at the National Board level the decisions are prepared within its office and the decisions may be taken by the Board or take the form of proposals to the Ministry. Such proposals may be included in the yearly budget requests for higher education which are forwarded by the board, and they may result in proposals to Parliament.

At the different administrative levels - ministry, national board, regional boards, universities and colleges - there exists a well-trained bureaucracy for the implementation of the reform decisions by legal and administrative measures. The implementation is facilitated by the fact that Swedish universities and colleges are part of the national administrative apparatus. They are, formally and legally, governmental authorities. That means that they are subject to the authority of the state but also that they can exercise it.

The national political and administrative apparatus has, in certain respects and to a certain extent, a high potential for changing the system of higher education. The fact that major changes are thoroughly prepared by committees and that the committee reports are commented upon by a wide circle of interests group helps to guarantee a pluralistic and comprehensive treatment of change problems. But this apparatus for management of change also has its weaknesses and limitations, and they are related to our two basic questions: how far can management manage and how is innovativeness and organizational structures related to each other.

3.2 The administrative structure within institutions

Within the Rector's Office of an institution administrators are dealing with matters concerning educational planning and administration. Among them are (at the universities) directors of education, who serve as chief officials of the educational program committees. This part of the administration was intended to play a role not only in the daily routines of educational administration but also in educational planning, in the implementation of reforms decided upon on the national level, and in promoting initiatives for change within the institution. To what extent they have fulfilled these expectations will be one of the items for the concluding chapter.

The educational program committees at faculty level were intended to have the main responsibility for educational planning and decision-making and to function as instruments for renewal of education. Have they been successful in this respect? This will be one of the reform cases in the next chapter.

Within the departments, something like a separate subsystem for undergraduate education has been developed since the end of the 1950's, partly as a consequence of the growing numbers of students. This subsystem consists mainly of university lecturers, who have no research duties, but are supposed to devote themselves fulltime to undergraduate education. The director of studies can be considered as the formal leader of this subsystem for undergraduate education within a department. He is

usually chosen among the university lecturers and his duties are to assist the department chairman by handling the administration, planning and development of undergraduate education.

These special functions for undergraduate education have had the advantage of ensuring that more time and attention has been given to the problems of teaching undergraduates. The educational innovators are usually found among university lecturers and perhaps particularly among the directors of studies. The directors of studies have no doubt had a clearly positive influence on the development of undergraduate curricula and teaching.

But they are too busy with daily administration and routine matters and have too little time for planning and innovation. And that is a basic problem for the organization as a whole: how can we give planning and management of change a higher priority compared to routine administration?

3.3 The R&D organization

At the central as well as the local level there exists a specific Research and Development organization for higher education. Within the National Board of Universities and Colleges there is a R&D Bureau. At the universities there are R&D sections within the Rector's Offices; (this was the case before the 1977 reform. The function still exists but the formal organization may vary between institutions.)

This organization was built up around 1970 on the basis of proposals from a committee on "university pedagogy". Its reports were based on educational technology together with the notion of R&D models as basic for innovation strategy. It was thought that general goals could logically be transformed into more detailed and concrete goals and that the means to reach the goals could be derived in a "scientific" way. The main instruments for making instruction more effective were training of teachers and adequate use of technical aids. The educa-

tional problems could be directly tackled through research which was supposed to provide adequate theoretical solutions. Through pilot projects these solutions should be developed in practice and then disseminated through project reports and teacher training.

When the organization was set up and started its work, the golden days of educational technology were over. Pure R&D models for change were hardly ever followed (in a certain contrast to developments within the Swedish school system). The organization never in practice worked in accordance with the ideology behind it, even if the local R&D units put much emphasis on supporting the production of text books and technical aids and even if the formal organization of the central R&D unit was adapted to the ideology, being divided into a research section, a development section and a section for in-service training of staff.

The present organization is that the research section still exists, that the development section's main task now is the evaluation and follow up of the 1977 reform and that the section for in-service training has been transferred to another bureau within the Board. About 15 persons work fulltime at the Bureau, which now has a budget of about 13.000.000 Sw.Crs.

The research activities mainly take the form of supporting research projects at universities, arranging symposia and conferences, publishing reports, and similar activities. During the years the program has been in operation, there has taken place a marked shift from pedagogical research towards social and organizational research. It is interesting to make a comparison with the research concerning primary and secondary schools supported by the National Board of Education. The National Board of Education uses its R&D funds so that departments of education (pedagogy) receive 80 percent, while the research program of the National Board of Universities and Colleges spends about 80 percent on other disciplines. Economists, sociologists and political scientists are well represented in research on higher education.[1)]

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1) For a current overview of the research program, see Björklund.

During the few years it has existed,a substantial change has also taken place within the former development section. While it previously funded a variety of external development projects, the section now emphasizes two types of activities: one is the evaluation and follow-up of the 1977 reform and the other is projects within the five professional sectors, carried out in cooperation with the planning boards (see section 1.2). The projects for follow-up of the reform are of two types. One is aimed at evaluation of certain aspects of the reform: the new entrance regulations and the social effects of the reform, the new institutional organization, the new budget system etc. Another type is projects for the further development of some basic ideas behind the reform. Presently there are two projects of this type. One concerns institutional self-evaluation in higher education and aims at promoting the development of higher education as a self-evaluating and self-renewing system.[1] The other one deals with the inner structure of educational processes and aims at developing ideas such as problem-orientation and project organization in undergraduate studies. - The sectorial projects are predominantly of two types: one concerns the development of new ideas, techniques or programs, and the other the evaluation of programs.

Most of the central projects are carried out at the universities and colleges but a new trend is that in some cases project leaders are associated directly with the R&D bureau. This is presently true for some parts of the reform follow-up.

The activities of the local R&D units have been dominated by funding small development projects within departments, by arranging in-service training for staff, and by pedagogical consultation. No systematic evaluation of the activities has been undertaken, and it is difficult to tell what influence on change in general that the R&D-funded projects have had. The ideology of the local R&D units must be expressed in very general terms like promoting change, encouraging involvement in education, encouraging educational efficiency, initiating change processes etc. What clearly can be said about the effects

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1) This project is presented in Östergren 1977,(a).

of the local R&D units is that they have played an important role in relation to the above-mentioned subsystem for undergraduate education, that they have helped to promote involvement in undergraduate education and its development and given this task a value of its own (not only being looked upon as an appendix to research and graduate education).

The R&D activities have been and are in some respects controversial. Within the National Board of Universities and Colleges (and its predecessor, the Office of the Chancellor) the R&D units have been looked upon as an unbureaucratic and deviant subsystem and its efficiency and real influence on practice have been questioned. A similar situation has existed at the local level, where representatives of educational program committees have criticized the R&D sections for being self-contained and isolated from the actual planning of educational matters. The critics have proposed that the R&D work should be integrated in the activities of the program committees. A usual answer from R&D staff has been that it is important that there is a development activity which is independent of majority ideas and which has a free, searching and avant-garde character. But far from all R&D projects seem to have had such a character. Be that as it may, there are signs that a better integration with planning activities and program committees has taken place and perhaps still more will follow as a consequence of the 1977 reform. Ideally, this could mean a more effective management for change, but only if experimental activities, marginal people and deviating ideas are given the opportunity of developing themselves.

Within the R&D bureau of the National Board there is a constant debate about how best to organize the future R&D program. Opposite opinions have been expressed in terms as "knowledge-orientation" versus "mission-orientation". But it seems rather to be a question of how new knowledge about the problems of higher education is produced: is it produced only by pure or academic or discipline-oriented research or are other types of projects essential not only for evaluation or development or

actual change but also for the production of basic knowledge?[1] How should the different types of programs be balanced in relation to each other? To what degree and through what procedures should the research program be directed? Should the R&D bureau look upon itself as a unit for change, should it develop an ideology as a basis for change, should it take on a leadership for change? Or should it regard itself more as a knowledge-producing unit, some type of research council for higher education?

Questions like these illustrate that a new theoretical basis, a new change strategy has not yet been built on the ruins of educational technology and R&D models. This is certainly a fundamental problem for the management of change. But it is also a challenge to it.

3.4 The organization for in-service training of staff

In-service training for teachers and other staff has been a part of the R&D organization. On the central level these activities now belong to the administrative bureau of the National Board of Universities and Colleges. On the local level the organizational arrangements vary, but within the administration of institutions there is a responsibility for in-service training.

A few courses are organized centrally. One type has general purposes: courses for teacher development, for directors of study, for department chairmen etc. Another type is courses and seminars with specific purposes, e.g. to promote internationalization of education or to develop institutional self-evaluation.

Most of the in-service training is organized by the individual universities and colleges. These local programs cover a wide variety of courses, seminars and conferences for all types of staff. A one-week introduction course is intended for all

1) Cf:"The goal of this discipline-based research is not to solve the practical problems of innovation; rather, it is to advance the development of the discipline." Baldridge-Deal, p. 5.

teachers.

The in-service training is voluntary and the lengths of the arrangements can vary from part of a day to several weeks. Plans exist to enlarge the teacher training program with the aim that all teachers should visit courses regularly.

By an international comparison the Swedish program for in-service training probably ranks high. It seems to have a considerable potential to promote change and raise effectiveness. One weakness is that it seems as if a limited group of committed teachers - usually relatively young university lecturers - are most actively involved in the in-service training. Meeting university teachers, one not seldom observes that teachers who are particularly conscious and active often have taken part in the more advanced courses. But are they good because they went to the courses, or did they go to the courses because they were good? Probably the answer to both questions is yes.

4. REFORMS AND REFORM STRATEGIES

As mentioned earlier, the concept "reforms" or "national reforms" refers to broader and more far-reaching changes, usually decided by Parliament but in some cases by the Cabinet or the National Board of Universities and Colleges. In this chapter a few reform cases will be briefly presented, and after that some conclusions concerning reform strategies will be drawn.

4.1 Some reform cases

4.1.1 The 1969 reform of education within the philosophical faculties

Traditionally it has been possible for students at the faculties of liberal arts (humanities), social sciences and natural sciences (these three faculties are together called the philosophical faculties) to combine subjects and courses in practically any way they wished to achieve the undergraduate degree (the equivalent of Bachelor of Arts), provided they had reached the stipulated number of marks or credits. In contrast to e.g. the faculties of law, medicine or engineering there was no fixed degree program. The only restriction within the philosophical faculties was that for certain professions, e.g. secondary school teachers, subjects and courses must be combined in a prescribed way.

During the 1960's this order was criticized. The students, it was said, were tempted to combine subjects in a way which made the degree less useful on the labor market. The possibility of studying subjects and courses in any order was also considered to be disadvantageous from a pedagogical point of view, because it was not possible to base a course on what students had learned in a previous course. There were also other types of criticism, focusing the fact that the students could determine their own time of study, and dwell for long at a course or a subject.

Behind this type of criticism was, of course, the extreme expansion in the number of students at the philosophical faculties, where there were no quantitative restrictions for admittance in contrast to the more professionalized studies (law, medicine, engineering etc.). Fiscal considerations were combined with concern for the employment situation of new graduates. Increased professionalization and increased efficiency became high priority goals.

A committee within the Office of the Chancellor proposed that also studies within the philosophical faculties should be organized in fixed degree programs. Students were to get their degrees within a certain time,or risk being debarred from further studies.

The publication of the proposals coincided with the student unrest of 1968. The students had found a point where they could concentrate their attacks. The debate concentrated on problems like freedom of studies, education for social criticism versus education for the existing labor market etc. This criticism did lead to certain changes in the proposals. The degree programs were not as inflexible as had been suggested in earlier proposals; the first year the courses were not strictly fixed, the second year studies usually gave some alternatives and in the third year the choice of courses was optional. Furthermore, exceptions to the rules could be made in individual cases after a decision by the educational program committee. The committee could also allow a student to devise an individual degree program. Finally, students could always study courses independently and not within the framework of a degree program.

The immediate result of this reform was a tremendous lot of paper work for the educational program committees. In many of the individual cases they had to allow the students to make changes in the fixed degree programs or to combine individual programs. There were also troubles with the rules for debarring. At the same time the number of older students from working life was growing, and they usually do not want to

complete a full degree but only study one or two courses. The result was that only a minority of the students followed the fixed degree programs.

Among the reasons for the partial failure of this reform could be mentioned that the individual students belong to the most powerful decision-makers in questions concerning their own education; this fact was neglected by the designers of the reform. Furthermore liberal arts, social sciences and natural sciences can not be totally professionalized or adapted to very specific needs in very specific professions; their purpose is also to give a more general education that can be of value in various professions or just as cultural consumption. The reform effort also indicates that efficiency can not always be increased by formal rules. Finally, the reform was contrary to the growing tendencies towards recurrent education.

This case illustrates that there are limits to how far management can manage.

4.1.2 The 1969 reform concerning educational program committees, directors of education and study counsellors.

To support the reform previously discussed, certain other changes of organizational nature were realized. Looking on them separately, were they successful or not?[1)]

The educational program committees had been established before 1969, but the educational reform that year gave them new duties and a formally stronger position. They were intended to be the most important decision-making body in educational matters, to be responsible for programs and courses, to evaluate education and to initiate change. Planning and innovation were emphasized. But there is a vast gap between the intentions of central authorities and the actual functioning of committees. They were tied up with routine business and have been described as paper mills who mainly confirm decisions made elsewhere.

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1) This discussion is restricted to the philosophical faculties, but is in certain respects applicable also to other faculties.

But even when a committee functions in an inefficient manner, it fulfils a certain function by legitimating various measures and by being at least a potential control mechanism. The committees have, however, seldom functioned as instruments for change. The 1977 reform may mean a shift in this respect, mainly for three reasons: the committees in some cases work with a more limited area than a whole professional sector (by the establishment of additional committees); the committees have more power since they are now bodies for resource allocation; representatives of professional life outside universities have become members of the committees.

The directors of education are the chief officials of the program committees. They are usually fulltime employed administrators with teaching and research background, often former university lecturers. They were supposed to play an important role in the implementation of the 1969 educational reform by coordinating the courses within the educational programs and evaluating the programs. But because the programs mainly became paper constructions, there was not much to coordinate and evaluate. Even if the original intentions of this part of the reform not were realized, the establishment of directors of education was nevertheless a beneficial reform. To have leading administrators with teaching and research experience, concentrating on educational matters within a faculty, has proved useful. The problem is that they are too busy with current affairs and thus more reactive than active.

As instruments for implementation of the 1969 educational reform, full-time or part-time positions for study counsellors were established at the departments. Their function was to inform the students and to help in cases of difficulties with studies. The establishment of these positions was a reform with clearly positive effects. The counsellors had not only lived up to expectations but also undertaken other duties of evaluative and administrative nature. By talking to the students and by observing difficulties and effects of teaching,

they have been able to aggregate soft data about educational problems and then inform the director of studies and other teachers. In this way they have contributed to innovations and effectiveness.

But from this it does not follow that positions like the present for study counsellors are advantageous in the long run. In the post-1977 system with more freedom for institutions to decide how to use their resources, central regulations about positions like study counsellors should not be given. And a change of the role of teachers from lecturer to study advisor with a total responsibility for the educational situation of students, can make separate study counsellors superfluous; they could be a hindrance for closer contact between teachers, in their new role, and students.

So the study counsellors may be an example of how a reform with positive effects will have to be evaluated and reconsidered because of new developments in the environment.

4.1.3 The 1977 reform

The 1977 reform of higher education is so comprehensive and covers so many parts and aspects of the system, that it is impossible to give an overview of it in this paper. I will select my cases from four parts or aspects of the reform. But first a few words about the purposes of the reform.

The aims can be described in varying ways, but let us select this description[1]:

"- to widen access to higher education
- to promote social equality
- to increase the element of democracy in the decision-making process in administrative boards of higher education
- to decentralize the responsibility for administration and planning
- to promote the principle that all post-secondary programs should be meaningful to the students, both as foundations

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1) From Dahllöf, p. 6.

for postgraduate studies and as bases for professional work in wide sectors of society
- to promote flexibility in resource allocation, and
- to make prudent use of limited resources."

In several ways the reform means a broadening of higher education: broadening its scope, broadening access, and broadening its geographical distribution.

a) The organization

The scope of higher education has been broadened to include types of education previously not included within the university system, e.g. schools of social work, teacher's colleges, schools of journalism, nursing schools, colleges for training preschool and home economic teachers, schools for artistic training. In principle, the system is to be unified; schools for training preschool teachers, to take one example, are integrated in universities or colleges. (An exception to the unification is that a number of institutions are under municipal adminstration, e.g. nursing schools).

A number of other organizational changes have been made. Six regional boards with responsibilities in particular questions have been established. Representatives from outside the universities have been included in the regional boards, the institution boards and the educational program committees.

The construction of institutions varies greatly. The university of Lund comprises all state higher education in Lund and the neighbouring metropolis Malmö. In Stockholm and Gothenburg, on the other hand, there are separate institutions for medical, technical and the different types of artistic training respectively.

The field of organization is an example of an area where the present reform strategy is efficient in that the changes decided upon are carried out. If Parliament decides for instance that six regional boards should be set up, they are set up.

Another question is if the new organization will function smoothly and if the intended effects will be reached. In these respects a special evaluation program has been started.

It should be observed that one feature of the new organization is that institutions will have much more freedom to decide about their internal organization; previously the national government regulated much of it in detail. This is a change that can facilitate management for change by giving the institutions the possibility of choosing the most suitable organization with respect to circumstances and to change it when circumstances change.

b) The rules of admission

The usual way to university education has previously been the three-year secondary school, but in later years experimental programs have been in operation which permit persons without formal secondary schooling certain types of studies. The 1977 reform increases these possibilities and changes the rules for selection of students (if the number of applicants exceeds the number of places).

The applicants to full degree programs are divided in four groups[1]:

(1) applicants with three year secondary school,
(2) applicants with two year secondary school,
(3) applicants with certificate from a folk high school,
(4) applicants who are 25 years of age and have at least 4 years of work experience.

If admission is restricted, the number of places is distributed between the four categories in direct proportion to the number of applicants in each category[2]. When there is competition

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1) Here we disregard the admission of foreign students, for which there are special rules.

2) It must be added that applicants in categories 3 and 4 must have qualifications in English corresponding to two years of secondary schooling. It must also be added that there are special requirements for entrance to certain types of higher education, e.g. qualifications corresponding to three years of secondary school in natural sciences for admission to medical and technical studies.

between candidates within a category, working experience, no matter what kind it may be, gives applicants in categories 1 and 2 points that are added to the school grading point average. But there is a complementary rule that at least 20% of the places in each program or course will be filled by applicants on school marks alone. Applicants in categories 3 and 4 may in the same way add working experience to points based on assessment from folk high school and a general aptitude test respectively.

Rules of admission is an area where national reforms are very efficient from a technical point of view, because universities or colleges are parts of a national administrative system and a national decision thus affects them all. And entrance regulations are formal rules; formal rules and formal organization are what is most easily changed by reforms.

But what about the goals that were to be achieved by these formal changes? One of these goals was to help applicants without traditional formal schooling and applicants with work experience. It seems as if the latter goal has been fulfilled, perhaps more than was really intended; the rules have really favored persons with good schooling and work experience, and hit hard against students coming directly from secondary school.

Solving the problem of students without secondary schooling (category 4) only by admission rules is not possible. The lack of educational tradition often prevents them from going to a university and college (even if the economic problems are solved). There are indications from earlier experimental programs that the students who come from this category very often do not reach what they intended with their studies. The teachers like teaching students from this category because they are mature and motivated. But very often they do not pass the courses; this may be an indication not that these students have insufficient qualifications but rather that the type of education which is accomodated to young people from secondary school is not suited for this other category.

Admission rules is an area where different types of changes affect each other and also interact with other types of changes. Such chains of interactions and side-effects belong to the most difficult problems for the management of change. They must be carefully studied, and it seems likely that corrective or supplementary reforms will be needed.

c) The "new" colleges

One of the purposes of the 1977 reform is to make higher education more accessible from a geographical point of view. This is done in various ways, e.g. by long-distance education of various types. Furthermore, "new" colleges have been founded in several towns. They are not totally new, because they are based on an existing institution, usually a teacher college. But they now have an increased curriculum and can offer larger selection of courses than before. They are not supposed to compete with the universities in program offerings. Instead, the intention is that they develop shorter, vocationally oriented programs and courses.

The new colleges are another example of an area where national reforms are suitable instruments for change. The national government can widen the range of activities of a college by regulations and resource allocations.

How the new colleges will utilize this wider range remains to be seen. A characteristic of the Swedish system of higher education has been its uniformity. Centralism and the tendency of institutions to imitate each other have contributed to this trait. In contrast to other countries, new universities and colleges have not been experimental institutions but rather miniature copies of the older institutions. Whether or not the new colleges founded by the 1977 reform will take on more of an experimental character remains to be seen.

d) Decentralization and resource allocation

A feature of the 1977 reform is the decentralization of decision-making, giving institutions, faculty committees, educational program committees and departments more freedom to design the organization and organize activities.

This is done partly by a new system for resource allocation, according to which there are three main types of funds for three types of activities: general educational programs; individual and local educational programs as well as independent courses; research and graduate education. Within these frames there should, ideally, be freedom as to how to use the resources. But in reality there are a lot of restrictions, particularly personnel restrictions. Nevertheless, the new funding system means a higher degree of local freedom than the old one.

More local freedom is also achieved by simplifications in the system of rules and regulations and by decentralizing decision-making authority from national to local bodies.

It is apparent that changes in the resource allocation system and in the system of formal regulations are areas where national reforms represent the appropriate reform strategy.

But what will be the consequences of these changes? Consequences are often very difficult to foresee (there are such examples from earlier allocation systems). A program for evaluation of the new funding system is soon to be started.

One effect of the new governance system has already materialized. An identity crisis within the National Board of Universities and Colleges has arisen. The Board has largely been deprived of its earlier goals and of the instruments to realize them. There is a wide-spread uncertainty about what the new goals and the new instruments are. Such a crisis can be constructive if it is faced up to. The question is: can the National Board manage to change itself.

4.1.4 The Internationalization Committee

In 1972, the Office of the Chancellor of the Swedish Universities appointed a committee to propose an internationalization of higher education. The purpose of this committee work came close to the aims of the Unesco recommendation concerning education for international understanding, co-operation and peace, and education relating to human rights and fundamental freedoms.

The committee published some partial reports and a final report in 1974.[1] The changes connected with this committe work are in a borderland between reforms and innovations. The program as a whole may be regarded as a reform, internationalization is formally one of the main national goals of higher education. But the various practical measures usually fall into the category of innovations.[2]

The proposals of the committee can be divided into the following groups (apart from some proposals concerning the primary and secondary schools which are not dealt with here):

1. Bringing a global dimension into all courses and programs;
2. Special internationally oriented courses and programs;
3. Courses in professional language;
4. International exchange;
5. Organizational and administrative measures.

Another way to classify the proposals is:

A. Proposals to be implemented during the existence of the committee;
B. Proposals intended for implementation after the committee had been dissolved.

Proposals in category A were realized to a higher degree than proposals in category B. While the committee existed it could serve as an action-oriented group of innovators, which could

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1) See Östergren et al. 1974.

2) Three of the cases in the innovation chapter are from the internationalization area.

directly or indirectly influence the implementation of the proposals. When the committee was dissolved, no part of the Office of the Chancellor took over this role.

Proposals in categories 2 and 3 have been realized to a higher degree than proposals in category 1, which was given the highest priority by the committee. Categories 4 and 5 are in the middle of this scale of implementation.

Som probable reasons for this order can be mentioned. The language departments have been interested in attracting new categories of students (from other faculties) because the number of traditional language students has decreased considerably; furthermore special funding has been available for the new types of language courses. The same reasons apply to some extent to the courses and programs in category 2. And it seems easier to construct a specialized international course than to give a global dimension to an existing course.

International exchange has increased and new forms have been tested with the help of special funding, but the change is quantitatively small due to very limited special funding. Of the organizational measures, a proposal for international secretariats at institutions and at central level have not yet been realized due to lack of funds, while an innovative development has started in the field of in-service training, due to committed leadership and available funds.

The case - or rather the cases - of the internationalization committee illustrate how difficult it is to affect the inner dimensions - in this case the international dimension - of education by reform strategies. The national government cannot successfully order these dimensions to be changed. What it can do is stimulate development in a desired direction. So the internationalization program is well suited to illustrate the limits of reforms.

4.2 Some comments on reform strategies

There are many features of the Swedish society which make it comparatively easy to accomplish changes in higher education by means of national reforms. Such features are the small population of the country (8 million) and its homogeneity in regard to population, language, religion etc. The fact that universities and colleges are parts of a centralized governmental administration is another such feature as well as the homogeneous structure of the institutions and the uniformity of the system, which facilitate central decisions about change over the whole system.

In many respects national reforms have been effective instruments of change. If the issue is to change the rules of admission in order to meet social demands or adapt to reforms of secondary schools, a decision by national government has immediate effects for all institutions. The same applies to changes in, for instance, the resource allocation system or the formal institutional organization.

But in some respects the traditional reform strategies are less successful. Let us look at some of these aspects.

Even in those cases mentioned above where reform strategies were so effective that the changes decided upon really were carried through in a technical sense, there are difficulties in predicting and assessing longterm effects and side-effects. "The simple fact is that the planning and implementation of reforms are such complex and context-bound activities that the planners themselves have great difficulties in estimating the consequences of their recommendations, although the unwritten code of professional behaviour requires them to present a confident and smiling face to the public."[1] The 1977 reform of higher education in Sweden is an unusually complex reform, where various types of changes will affect each other in ways which are difficult to predict. That is a reason why a special program for the evaluation of the reform has been started.

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1) Dahllöf, p. 5.

Better possibilities for predicting the effects of reforms could be achieved if experimental extivities to a greater extent were part of the preparation for reforms. But in Swedish higher education that is done only to a very limited extent.

One apparent weakness is that central government has a lack of insight in the limitations to how far it can govern. This is clearly illustrated by the cases from the 1969 reforms. The private life of higher education, the interaction between teachers and students, is to a large extent beyond the reach of direct governmental action.[1] The expectation behind reform strategy is that a change of the formal conditions also will affect the private life. The national authorities overestimate, however, the strength of rules and regulations. They have a too strong belief that words on a piece of paper always are transformed into realities. This has been called "the mythology of central governance."[2]

To sum up: the Swedish system of higher education has a high but limited potential for change through national reforms. An apparent weakness is a lack of feeling for just what the limitations are.

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1) But such action can have indirect effects, sometimes surprising.

2) Östergren 1975 a, p. 20.

5. INNOVATIONS AND INNOVATION PROCESSES

This chapter starts with very brief summaries of seven comparative case studies of innovation processes in Swedish higher education. Some comments on innovation theory and strategy conclude the chapter.[1)]

5.1 Case studies of innovation processes

5.1.1 Undergraduate education in art, University of Lund (1972-1975)

The innovation consists of a curriculum change by which the traditional, chronological/historical approach is replaced by an emphasis on artistic expressions in various societies, a study of art in its relations to societal conditions. Furtermore, non-European art is integrated in the curriculum. The educational innovation has a background in changes within research: more emphasis on behavioral aspects, on modern art, on art as a societal phenomenon and on non-Western art.

The innovation grew through internal discussions within the art department of the university of Lund. The main innovator was a graduate student, whose efforts in this case led to his promotion to lecturer and director of studies. An important role was also played by an informal group of Marxist graduate students. A couple of assistant professors, whose research represented some of the modern trends, supported the innovation. The chairman of the department gave the innovators room to operate. There was an internal conflict which led to two teachers leaving the institution because of the innovation.

The university management neither supported nor attempted to stop the innovation. It has certainly not rewarded the art department for its innovativeness. The Office of the Chancellor aided in the realization of the innovation by relinquishing the requirements of a central curriculum plan for all universities.

1) This chapter is based on Berg-Östergren.

5.1.2 Eastern European Studies, University of Uppsala (1972-1975)

The innovation consists of the introduction of a new type of courses, area studies on the undergraduate level. There are two kinds of courses within Eastern European Studies: one consists of social sciences while the other includes studies in the Russian language, integrated with social science studies.

The initiative came from the Eastern European Research Center at the University of Uppsala, but the courses were included in a proposal from the Internationalization Committee of the Office of the Chancellor (see section 4.1.4). The program committees for social sciences and languages as well as the Rector's Office in Uppsala disapproved of the proposals as far as courses including the Russian Language were concerned; behind this seems mainly have been opposition from the Department of Slavic Languages, who feared competition with their own language education.

The Rector himself had not earlier been involved but was now approached by the Internationalization Committee, and he changed the position of the Rector's Office so that the courses could start. But there was continuous heavy opposition from the Department of Slavic Languages which wanted to take over the language training; the conflicts concerned mainly which language teachers should be employed but behind this were different ideas about language education and its integration with the social science studies. Successively, the power of the teachers and students within Eastern European Studies grew in relation to the power of the Department of Slavic Languages.

In the beginning of the innovation process the innovation was, economically and in other ways, strongly supported by the Office of the Chancellor, while the Rector's Office in Uppsala was against it. At the end of the process the situation was quite different: the Office of the Chancellor was at best neutral while the innovation was clearly supported by the Rector's Office. What were the reasons for these shifts?

Within the Chancellor's Office the Internationalization Committee had been dissolved and no other group was committed enough to act in support of the innovation; the usual administrative procedures were followed. Within the Rector's Office it was noticed not only that the Rector personally supported the innovation but also that the courses had been a great success, whith large numbers of satisfied students, that had its effects on attitudes and behaviors within the Rector's Office. The program committees did not play an important role.

This case illustrates, among many other things, what power a University Rector can exert, if he wants to. It also illustrates the power of those teachers and students which are directly involved in an innovation.

5.1.3 Proposal by the Internationalization Committee for a new study course in civics.

The undergraduate course in civics on the university level is aimed at preparing teachers in civics for the secondary schools. It is a so called block subject and consists of subcourses from political science, economics, and sociology. The discipline-based subcourses are not integrated with each other.

The Internationalization Committee wanted a more global dimension in the course, and found that such a change would be facilitated if, at the same time, the disciplines were integrated into a problem-based structure. In its final report, the Committee presented an outline of a new course according to these ideas.

The Committee had expected a negative reaction because the proposal could be interpreted as a threat to disciplinary values and interests. But to the extent that the proposal was commented by the departments concerned, the comments were favorable. Yet no initiative has been taken to develop and realize the proposal.

The Committee had finished its work and did not exist any more. But why did not the Office of the Chancellor take an initiative? Confusion about the division of administrative responsibilities, the usual fragmentization of bureaucracies, and lack of coordination contributed. And why did not a local initiative appear? Well, why should it? Even if many departments had verbalized support, there were no real incentives to start doing something.

The case is almost a caricature of innovation attempts according to a center-periphery model and of public reform strategy. A proposal is presented without a local basis and it is not followed up. Action is expected from university departments, but there were really no reasons to expect such action.

5.1.4 Environmental Studies Programme, University of Lund (1968-1976)

The innovation is the establishment and development at the University of Lund of a specific organization for education, information and investigative activities in environmental protection issues. This organization contrasts with the usual organization in discipline-based departments.

The initiative was taken by a few graduate students and assistants, who were strongly influenced by the growing debate on environmental problems. They got active support from the Rector of the University and the Dean of the Faculty of Engineering (who later became Rector). The Rector manoeuvered very cleverly and carefully in order not to create any opposition against the idea. The activities of the programme grew more and more, both in terms of educational activities inside the university and external, community-oriented activities. But the organization was very informal and it had no statutes. When the question of drawing up statutes was raised, there was opposition against the Programme as such from the faculties of

medicine and social sciences. This opposition seems to have been enhanced by the establishment of a course in occupational environment problems, which was considered to be a competition with certain departments within these two faculties.

Even if the Programme seems to be well institutionalized, only slight changes in the balance of forces are needed to make the position of the Programme critical.

One could have expected much more controversy in this case, because the organization is contrary to dominant features in the existing system and can be regarded as a threat to activities or potential activities within certain departments. The process is characterized by efforts to keep the conflict level low by trying to minimize opposition. While high external visibility was desired in order to get support and resources, visibility within the university was kept low.

5.1.5 Architecture, Chalmers Technological Institute (1971-1975)

The innovation is a change of the architectural education from a subject-oriented, course-bound program of study to a basically problem-oriented and project-structured one. The change affects the entire four-year program and touches on goal orientation as well as on content and instructional methods. There are obvious links between this innovation and the student movements at the end of the 1960's.

The initiative was taken by a group of assistants and graduate students and by undergraduate students in the last (fourth) year of study. A special group for reorganizing education was appointed by the Section of Architecture and they proposed a change of all studies. A new dean supported the change. Opposition was low, which partly can be explained by the fact that some professorships in disciplines which could be threatened by the change were vacant. After the start of the new type of studies, opposition grew among teachers and there was

also a certain critique from students, but in both groups there seems to have been a clear majority for the change all the time.

The Rector's Office did not interfere in the innovation process. It is not certain that the change would have been tolerated if it had concerned some of the engineering educational programs. But the section of architecture has always been regarded as a deviant subsystem and it has,with mild indulgence, been allowed a high degree of artistic freedom.

It is surprising how low visibility this innovation has outside architectural education. The Swedes have gone to the University of Roskilde in Denmark to study project-based education. They have not known that there is an example covering a whole educational program in their own country.

5.1.6 Systematic Anatomy, Stockholm Caroline Institute of Medicine

The Systematic Anatomy course is a two week introduction course to the main studies of anatomy for future physicians. In two respects this innovation is a divergence from traditional anatomy education. Students have experienced this traditional type as a rote memorization of an enormous list of names. The antithesis of this is functional anatomy, where function is the central issue. The innovation represents the latter type of approach. Furthermore, the teaching methods have been changed. Student activities, concentrating on work in small groups, are central, and the teacher functions as advisor and resource person.

The initiative to this design was taken by a young assistant; she got the support of the director of studies,and he convinced other teachers by presenting the nature of the innovation in a very cautious way.

When the course had started there were controversies with some teachers, but the innovators won the battles thanks to support from the acting department chairman and the students.

Efforts to introduce the same type of change in a part of the main anatomy course have been met with strong opposition.

5.1.7 Instructional television at the School of Technology, Linköping, (1963-1976).

The change consists of an effort to base engineering education on educational television to a great extent. The effort was unsuccessful.

In 1969 a new faculty of engineering was started in Linköping. Its establishment was based on proposals from a governmental committee, which had worked since 1963. The committee also proposed the wide use of ITV, for financial and efficiency reasons, and the basic decision in this respect was taken by Parliament.

The TV programs were produced by a special national organization, the Committee on Radio and Television in Education. It cooperated with the Office of the Chancellor of the Swedish Universities, and groups of subject experts were involved in the production of the programs. Among these were, however, no teachers from Linköping, because they had not yet been appointed. The TV programs were developed in a very thorough manner, and they were tested, evaluated and changed before being used in Linköping.

Before the TV instruction started in Linköping in 1970, there was no opposition against it. But criticism and conflicts around the TV instruction constantly grew, reaching its peak in 1971/72. From 1972 the quantity of centrally produced TV programs started to decrease substantially, and from 1974/75 TV programs produced by the school of technology itself dominated. The Parliament formally changed its earlier decision in 1973. The total extent of TV instruction is now much lower than it was in the beginning.

This case illustrates, simultaneously, three change models: center-periphery, power-coercive, and research and development. The innovation was initiated and determined on the ministry and parliament level. The technological institution in Linköping was obliged to arrange instruction through an external organization, the Committee on Radio and Television in Education. It was really a question of power and coercion. The innovation was carefully designed, tested, and evaluated, before it was implemented in Linköping.

And still, the innovation was not successful. Some may say that the innovation was bad and was abandoned for that reason. They may maintain that this was the wrong way to use TV for instructional purposes. Others may maintain that the intentions were good but failed due to the conservatism of the teaching staff and the built-in resistance to change.

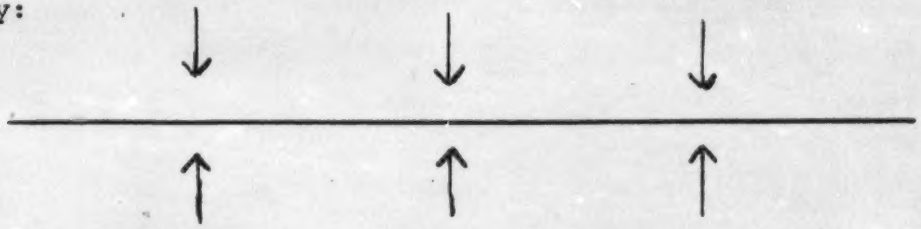
But the process can also be analyzed as a case illustrating the general conditions for change. It then becomes obvious that there was no local potential for the survival of the innovation. Hope for gains, ownership, leadership, and a local power structure that was positive to the innovation - all of this was missing.

5.2 Some thoughts on innovation theory and strategy

Many types of innovation theories can help explain the nature of change. On the basis of the case studies briefly summarized above, my colleague Barbro Berg and I have drawn conclusions which also form a theoretical approach to explain innovation processes. These conclusions will be summarized here, not with the pretention that they represent the only way to explain the innovation processes but as one way of explaining this particular kind of innovations in this particular setting. Hopefully, this approach can help us to a better understanding of problems concerning management of change.

Characteristic for this approach is that it is not claimed that the conclusions are generally valid but only that they are valid for a particular type of innovations in a particular type of system. All the innovation processes in section 5.1 represent what has been called system-deviating innovations (see section 1.3). And the particular system is the universities in Sweden. But even if it is not claimed that the conclusions are valid for other types of innovations in other systems, it is possible that they are to a certain extent.

An innovation process can be explained with help of the field theory of Kurt Lewin.[1] He looks at change as a systemic phenomenon; a change process depends on the constellation of forces in the social field as a whole. In relation to a particular change these forces can be pro-innovation, i.e. driving forces, or anti-innovation, i.e. restraining forces. The forces can be seen as grouped around a quasi-stationary equilibrium in this way:



A change of the balance situation in a certain direction requires an increase of the total force on one side or a decrease on the other side.

What determines how forces behave in relation to a particular innovation? On the basis of our empirical studies of innovation processes in Swedish higher education, we have found that four determinants are of particular importance: gain/loss, ownership, leadership, and power.

The gain/loss factor means, that the position of the subsystems and individuals is determined by their interests and needs, of whether they win or lose through the innovation. Gain or loss

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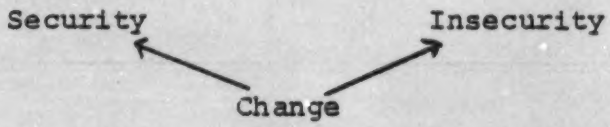
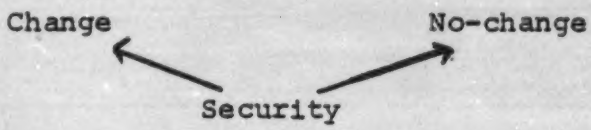
1) Lewin 1951.

may refer to a variety of factors: material resources, expansion possibilities, position, reputation, psychological satisfaction, value system etc. It seems as if two types of gain/loss were particularly important. One is security/insecurity. The position in relation to a change can be described in this manner:



or in this way



The other particularly important type of gain/loss is an ideological need, an ideological gain or loss. From the standpoint of a subsystem, the ideology of the subsystem must be maintained. From an individual standpoint, the gain is one of having created something that gives satisfaction. The best term may be self-realization, both systemically and individually.

Ownership signifies the quality of feeling such participation in the emergence and the development of an innovation that one feels as an owner or a co-owner in the innovation. Absence of ownership predestinates a negative or indifferent attitude towards an innovation.

The concept of leadership is, and rightfully so, given great emphasis in explanations of change and innovation. It is possible to distinguish between different types of leaders with disparate roles in the management of change. The innovation leaders (or primary leaders) are those who have primarily developed and implemented the innovation. Secondary leaders have supported the innovation in one way or the other. The formal leaders of the innovating subsystem (e.g. a rector of

a university or a department chairman) are important; their role can vary from strongly supporting an innovation in critical phases to a more passive legitimization of the innovation.[1)]

Power is here described as a system position giving the possibility of exercising a force of a certain magnitude in relation to other potential forces in the system. The constellation of system positions invested with power then becomes crucial for the course of the innovation process, to the extent that power is realized as force. In order to implement a system-deviating innovation, it is necessary to mobilize and exercise superior power. The process leads in these cases not only to a change within the system but to a change of the system.

The situation is another when the innovation belongs to the system-consistent category (see section 1.3). In these cases innovations are disseminated by information and communication processes.

The management of change encounters different problems depending on the character of the innovation. As far as system-consistent innovations are concerned, the main problem is to provide for a network of open communication channels, within institutions and between institutions, between institutions and the environment, nationally as well as internationally. Effective boards and administration which can take decisions about changes within their area are also of importance. But when the innovation is system-deviating, the emphasis must lie on bringing about a force field situation where the driving forces dominate. Crucial in this respect are factors like gain/loss, ownership, leadership and power, all of which are possible to influence.

But it is not only the character of the innovation, but also the character of the system that determines the problems of a management of change. The traditional organization of universi-

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1) These various types of leadership concepts are appropriate where the innovation process is a political process. Concepts like "change agent" or "gate keeper" are more applicable to diffusion processes.

ties is based on disciplines; the defense of the disciplines (their membership, ideology, technology etc.) then becomes a dominant determinant of the system. In other types of higher education institutions, other types of defences may be more important.

The specific situation prevailing in a system at a certain time period must also be taken into consideration. An estimate of the actual structure of the force field is always useful for the management of change.

6. CONCLUSIONS

6.1 How far can management manage?

How can one sum up the Swedish experiences of how far management can manage by directly effecting change? Let us try to do it in a few points.

1) Management can directly influence the formal structures, e.g. organization, rules of admission, formal construction of programs.

2) The effects of these influences are, however, sometimes uncertain and unable to foresee.

3) This calls for a thorough evaluation and follow-up of reforms.

4) The inner dimensions of higher education (e.g. the nature of education and research processes) are difficult to directly change through traditional public reform strategies.

5) Insight into the two types of limitations mentioned under 2) and 4) is necessary for successful management of change.

6) When management cannot directly effect change, it can often do it indirectly by various types of organizational structures (e.g. incentives and sanctions).

7) It seems likely that, in the future, traditional public reform strategies will be used to a lesser extent and self-renewal within institutions to a higher extent.

The last point should be elaborated a little, since it has not been discussed earlier in this paper.

The characteristic features of the public reform strategy can be described in the following way. Certain problems are identi-

fied and are given attention in the public debate. A governmental committee is appointed to look into the problems and propose solutions. The committee works for some years and publishes one or more reports, which are sent out for comment. The proposals and the comments are taken into consideration within the Ministry of Education. A proposal is made to the Parliament, which makes a decision. This decision is transformed into formal rules and regulations.

At least two circumstances have made this change strategy less effective now than earlier.

One is that development is now so rapid that problems often or to some degree become irrelevant, less important or different during the drawn-out reform process.

The other is that human organizations are now so complicated that they in some respects are difficult to change through formal rules and regulations from central authorities. The effects of such changes are also often unpredictable.

Public reform strategy will certainly be needed in certain areas also in the future. For instance, a reform of secondary education in Sweden is under preparation in a governmental committee. After such a reform, some consecutive reforms will certainly be necessary in higher education.

But it is desirable that the need for reforms is diminished and that higher education develops itself as a self-evaluating and self-renewing system.

6.2 Innovative organizational structures

The enormous problem of how an organization shall be designed to be innovative cannot be discussed here in any comprehensive way. After a general comment, some conclusions based on the experiences presented in this paper will be summarized.

The high degree of centralism and uniformity in the Swedish system is favorable for change through national reforms but it has an adverse effect on change through deviating local experiments. Innovations through alternative structures are rare in Swedish higher education, and there are no institutions with a radical experimental character. On the other hand, the Swedish system seems to have developed a fairly good capacity to innovate within existing structures and in spite of central regulations.

The following remarks are mainly concentrated on aspects concerning the capability of the organization for self-evaluation, self-renewal and adaptation to changing societal demands. The aspects are listed without any order of priority.

1) It is necessary to decrease the amount of routine business. Otherwise, repetitive and bureaucratic processes will give themselves total priority over dynamic and creative processes. A certain neglect of formal duties and current affairs is healthy, if it is done in favor of critical and creative analysis and planning.

2) The manner in which the work is done (the character of the process) is more important than is usually recognized. Formal meetings of the usual type with an agenda full of routine matters make the participants passive and formalistic. Group work on basic problems promotes activity and creativity. We also know that temporary task forces, which are non-representative and heterogeneous, are more innovative than permanent bodies where the members represent a constituency.

3) Leadership is crucial for the management of change.

4) The influence on decision-making from all categories of teachers and from students is favorable to innovativeness.[1)]

5) Open channels of communication are well developed in two respects: a) between national institutions within the same discipline, in education as well as research, b) within a discipline on the international scene as far as research is concerned. They are not developed enough in the following aspects: 1) between different disciplines within an institution, 2) within a discipline in different countries as far as educational matters are concerned (in contrast to research), 3) between institutions and their environment, nationally and internationally.

6) Incentives and sanctions must be better developed in the field of educational innovativeness. They are now mainly related to research activities.

7) The most striking conclusion of the evaluation of change evaluations is that evaluation has little effect on change. It seems as if there were separate groups of professional evaluators whose activities scarcely affect decison-making. The main problem of evaluating change is not to refine its techniques or to expand it quantitatively. The main problem is to include evaluation in decision-making. Institutional self-evaluation must be the core of the normal activities of universities and colleges.

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1) In these respects the Swedish system seems to be advanced, by an international comparison. It is also advanced in two other respects which seem to have adverse effects. Security of employment is very well developed in Swedish higher education, which means that it is difficult to make changes that affect the staff situation. Further, there is a law which gives the unions vast possibilities for negotiations in matters of organizational change. Having merits from other aspects, these laws do not facilitate change.

8) Institutional freedom gives wide possibilities for the institution to change itself, to a certain extent and in certain respects. But there are also adverse effects of institutional autonomy. Left to itself, an institution could constantly keep its quasi-stationary equilibrium because the balance between countervailing forces prevails. It is one of the most delicate and contingency-determined problems of higher education to balance institutional autonomy and central governance. In some respects, however, the conclusions of empirical findings are apparent. One is that decisions about discontinuing certain activities must be taken on a level higher than the level concerned. The most important function of regional and national bodies is to make decisions about reordering priorities.

9) A wide scope must be given for experiment, and it must be accepted that some experiments must fail.

10) Innovators and marginal men must not only be tolerated but be given possibilities to reach positions within the system from where they can work for change.

11) Change processes should be promoted through in-service training of staff, organization development, action research, project groups, institutional self-evaluation, staff mobility, external contacts, etc.

12) Economic and other support for innovations is often restricted to earlier phases of the innovations process (the development of the innovation). But it is important that such support is given during the entire process. The phase of institutionalization is often particularly critical.

13) Changes of staff, within the system, and between the system and its environment, are favorable for change. But so is the feeling of one's security not being threatened.

14) The organization as such must be flexible. Maybe it is favorable for change that the organization is in a constant state of flux. Perhaps we have to form our future, for change and security, in organizational tents instead of organizational palaces.

15) The system of higher education must build up more knowledge of itself, its characteristics, its reactions to change and its change processes. This knowledge base is the most important foundation for the management of change.

6.3 The applicability of the Swedish experiences

There are national features in the Swedish system of higher education which somewhat limit the applicability of the findings on universities and colleges in other countries. Such features have been previously mentioned.

But in many important respects, institutions of higher education in different countries are very similar. The characteristics of the systems - membership, ideology, technology, organizational structure and relations to the environment - are basically identical. The dominant features of universities of the traditional type are that activities are based on disciplines, that subject departments (or similar types of organizations) are the fundamental organizational units, and that the primary functions of the system are the production of new knowledge through research, the production of new producers of knowledge through graduate education and the transmittal of knowledge through undergraduate education. Other types of institutions have other features in common. It is in such common determinants that we find the origin of the problems which encounter the management of change.

Our conclusion is that empirical findings concerning conditions of change in Swedish higher education have a high degree of applicability for higher education in countries with a similar

general structure and a significant applicability in most respects for most countries.

The situation is different when we turn to primary and secondary schools. Looking at the system characteristics we find important dissimilarities if we compare with research universities, less so if the comparison is made with college-type institutions which are closer to the secondary schools. My opinion is that there has been a tendency to treat educational change as one problem area, neglecting important differences between various types of educational institutions. These interinstitutional differences are often more essential than differences between institutions of the same type in different countries.

To some degree experiences in higher education can be translated to organizations for primary and secondary education. But it must be recognized that there is a problem of translation.

Some conclusions have, of course, validity for any type of organization. Among these is a basic one: that the most fundamental prerequisite for a successful management of change is to know the organization. Kurt Lewin has expressed it in this way:

> The structure of the organism, of the group, of the setting, or whatever name the field might have in a given case, has to be represented and the forces in the various parts of the field have to be analysed if the processes (which might be either constant "habits" or changes) are to be understood scientifically.---
>
> Therefore, to predict which changes in conditions will have what result we have to conceive of the life of the group as the result of specific constellations of forces within a larger setting. In other words, scientific predictions or advice for methods of change should be based on an analysis of the "field as a whole", including both its psychological and nonpsychological aspects.

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1) Lewin 1951, pp. 173-174.

This quote indicates a useful combination of the systems and contingency approaches in the management of change.

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